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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,017	10/18/2000	Haruo Kamei	550718.077	4521

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EXAMINER	
OJINI, EZIAMARA ANTHONY	
ART UNIT	PAPER NUMBER
3723	

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/691,017	KAMEI, HARUO	
	Examiner	Art Unit	
	Anthony Ojini	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7,9,11,13,14 and 16-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7,9,11,13,14 and 16-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7,9,11,13,14,16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nokubi et al (EP 0 798 081 A2) in view of Kitajima et al. (5,495,844) and Kimura et al. (4,753,838).

With respect to claims 7,9,23, Nokubi et al. (EP 0 798 081 A2) disclose an abrasive material comprising a core (1) and a polishing layer, wherein the polishing layer comprises abrasive particles (2), wherein the core is made of porous synthetic resin and the abrasive particle is in the form of granules (see col. 2, lines 31-39 & fig. 1).

Nokubi et al. fail to disclose wherein the polishing layer comprises a flexible layer formed on the surface of the core and the abrasive.

Kimura et al. disclose a polishing sheet comprising flexible synthetic resin layer sheet (1).

Kitajima et al. disclose an abrasive material comprising a core (10) and a polishing layer (14), wherein the polishing layer comprises a bonding layer made of water-soluble epoxy resin formed on the surface of the core and abrasive.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with polishing layer comprises a flexible layer formed on the surface of the core and the abrasive in view of Kitajima et al and kimura et al. so as to retain the abrasive particles on the core during polishing process.

With respect to claims 11,13, Nokubi et al. fail to disclose wherein the polishing layer comprises multiple layers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with the polishing layer comprising multiple layers so as to so as have sufficient resiliency, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With respect to claims 14,16,17,18, Nokubi et al. to fail to disclose wherein a flexible layer comprises an emulsion adhesive, the abrasive particles are attached onto the emulsion adhesive and the emulsion adhesive is subjected to a heating and drying process; and wherein the polishing layer comprising an emulsion adhesive mixed with abrasive particles is applied to the core and subjected to a heating and drying process.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with an abrasive material wherein a flexible layer comprises an emulsion adhesive, the abrasive particles are attached onto the emulsion adhesive and the emulsion adhesive is subjected to a heating and drying process; and wherein the polishing layer comprising an emulsion

adhesive mixed with abrasive particles is applied to the core and subjected to a heating and drying process so as to retain the abrasive particles on the core, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (e.g. retaining abrasive particles onto the core) as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v. Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

With respect to claims 19, 26, Nokubi et al. disclose adhesive made selected from synthetic resin (a form of rubber latex), (see col. 4, lines 30-35).

With respect to claims 20,21,24, Nokubi et al. fail to disclose the optimum range as claimed by the applicant.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al with the optimum range as claimed by the applicant so as to create a recess for holding therein a polishing slurry, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to claim 22, Nokubi et al. disclose an abrasive material comprising a plurality of granules having an internal core (1) and an external polishing layer, wherein the polishing layer comprises abrasive particles (2) (see column 2, lines 31-39 & fig. 1). Nokubi et al. fail to disclose wherein the polishing layer comprises a flexible layer formed on the surface of the core and the abrasive, said flexible layer substantially surrounding the internal core.

Kimura et al. disclose a polishing sheet comprising flexible synthetic resin layer sheet (1).

Kitajima et al. disclose an abrasive material comprising a core (10) and a polishing layer (14), wherein the polishing layer comprises a bonding layer (15) made of water-soluble epoxy resin that substantially surrounds the core.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with polishing layer comprises a flexible layer substantially surrounding the internal core in view of Kitajima et al and kimura et al. so as to retain the abrasive particles on the core during polishing process.

With respect to claim 25, Nokubi et al. fail to disclose emulsion adhesive flexible layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with emulsion adhesive flexible layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (e.g. retaining abrasive particles onto the core) as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v. Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

Response to Amendment

Applicant's arguments filed 03/04/04 have been fully considered but they are not persuasive.

Applicant argues that "that one of ordinary skill in the would not have been motivated to combine either of these references with" European Patent No. 0798081A2 to Nokubi et al. "because they relate to entirely different types of abrasive material. For example' The U S. Patent No. 5,495,844 to Kitajima " discloses a segmented grinding wheel for use in a grinding machine and' U.S. Patent No. 4,753,838 to Kimura "discloses a polishing material for polishing a silicon wafer". **However**, Kimura et al. disclose concept of a polishing sheet comprising flexible synthetic resin layer sheet. Nokubi et al. disclose the concept of an abrasive material comprising a core and a polishing layer, wherein the polishing layer comprises abrasive particles, wherein the core is made of porous synthetic resin and the abrasive particle is in the form of granules except wherein the polishing layer comprises a flexible layer formed on the surface of the core and the abrasive. Kimura et al. disclose a polishing sheet comprising flexible synthetic resin layer sheet; and Kitajima et al. disclose an abrasive material comprising a core and a polishing layer, wherein the polishing layer comprises a bonding layer made of water-soluble epoxy resin formed on the surface of the core and abrasive.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus of Nokubi et al. with polishing layer comprises a flexible layer formed on the surface of the core and the abrasive in view of Kitajima et al and kimura et al. so as to retain the abrasive particles on the core during polishing process.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Ojini whose telephone number is 703 305 3768. The examiner can normally be reached on 7 to 4 Tuesday-Friday with every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 703 308 2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AO
March 31,2004